DETERMINANTS OF CAPITAL STRUCTURE IN COMPANIES LISTED IN THE JAKARTA ISLAMIC INDEX

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ABSTRACT

Capital structure is permanent financing consisting of long-term debt, preferred stock, and shareholder capital. Therefore, it is necessary to examine whether internal factors including company size, liquidity, ROA (Return on Assets) and sales growth affect the capital structure of companies listed in the Jakarta Islamic Index. This study aims at examining the effect of company size, liquidity, ROA and sales growth on the capital structure. The analysis used in this study was a multiple linear regression analysis. The results showed that company size, liquidity, ROA and sales growth have a significant influence on the capital structure of companies listed in the Jakarta Islamic Index, while the rest was explained by other factors not included in this study.

JEL Classification: G1, G19

Keywords: Capital structure, Internal factors, Multiple regression, Sharia issuer, Jakarta Islamic Index

1. INTRODUCTION

Increasingly harsh competition in business and the economy has forced companies to increase company value fast. One of the efforts to increase company value is by enhancing the prosperity of owners or shareholders. The existence of shareholders and the role of management is very important in determining the profit obtained. In dealing with such conditions, each company is required to be able to read the prevailing situation so that it can manage its functions well in
marketing, production, human and financial resources to outperform competitors.

Decision managers make in an expense must carefully consider the nature and cost of the funding source because each funding source has different financial consequences. The source of the company’s fund is all estimates contained on the balance sheet side, from accounts payable to retained earnings. These are better known as financial structures (Riyanto, 2001).

The need for capital in addition to other supporting factors is very important in building and ensuring company continuity. Capital is needed by every company, especially for company expansion. Therefore, the company must determine how much capital is required to finance its business. This need can be met from various sources of different types. Capital consists of equity (self-owned capital) and debt; this debt and self-owned capital in the company’s financial structure is called capital structure (Husnan, 2001).

Capital structure or capitalization is a permanent financing consisting of long-term debt, preferred stock, and shareholder capital (Weston and Copeland, 1999). The Capital structure can also be interpreted as a balance or comparison between the amount of long-term debt and self-owned capital (Riyanto, 2001). According to Kartadinata (1999), the financial structure describes the overall arrangement of the balance sheet credit consisting of short-term debt, long-term debt, share capital and replanted earnings. While the capital structure is composition or comparison between self-owned capital and long-term loan, so the capital structure is part of the financial structure. The size of the capital structure ratio indicates that there are many small amounts of long-term loans rather than their self-owned capital invested in fixed assets used for operating profits.

In this study, the capital structure is proxied by the Debt to Equity Ratio (DER) which is the ratio between the source of funds from third parties to equity. Schmukler and Vesperoni (2006) suggest that the higher the DER, the higher the risk of the firm because the debt financing is greater. Safavian and Sharma (2007) revealed that investors tend to be more interested in certain DER levels of less than one because anything greater than one indicates high corporate risk.

Riyanto (2001) argues that variables affecting capital structure are (1) the interest rate; (2) stability of earnings; (3) composition of assets; (4) risk level of the asset; (5) amount of capital needed; (6) state of the capital market; (7) nature of management; (8) company size. According to Weston and Copeland (1999: 35), the variables affecting capital structure are (1) sales growth rate; (2) cash
flow stability; (3) industrial characteristics; (4) asset structure; (5) management attitude; (6) lender attitude. Meanwhile, according to Weston and Brigham (1998), variables affecting capital structure are: (1) the stability of sales; (2) asset structure; (3) leverage operations; (4) growth rate; (5) profitability; (6) taxes; (7) control; (8) management attitude; (9) lender attitude; (10) market conditions; (11) company internal conditions; (12) financial flexibility.

According to Riyanto (2001), one of the variables influencing capital structure is company size or the size or amount of assets owned by the company. The company size is proxied by the logarithm value of total assets (Saidi, 2004). Company size can be used as a proxy for the uncertainty of the future state of the company. According to Dehning et al. (2007) a large company has a wide spread of shares, thus any share capital expansion will have a small effect on the possibility of loss or shift of dominant corporate control over the company. In contrast, at small companies with a small range of shares environment, an increase of shares amount will have a great influence on the possibility of losing control by the dominant party on the company concerned. Thus large companies are more courageous in issuing new shares to finance their sales growth when compared to small companies. It can be said that big companies tend to have big debts. Thus there is a positive relationship between company size and debt. Vassalou and Xing (2004) stated that size has a significant positive effect on DER, but according to Sharma (2005), size has no significant effect on DER.

Freund (2005) described Current Ratio as the ratio between current assets to current liabilities. This ratio shows the company’s ability to pay its short-term liabilities using its current assets. A high current ratio indicates that the company has a large cash position and is capable of paying its debts immediately so that the company will eventually gain the trust of creditors who issue debt in large amounts. Therefore, there is a positive relationship between liquidity with debt to equity ratio. This is also in accordance with the research conducted by Schmukler and Vesperoni (2006) who found that company liquidity has a positive relationship with DER. Liquidity has a significant positive effect on DER.

Profitability is also a variable affecting the capital structure. In this research, profitability is represented by Return on Assets (ROA), that is by comparing net income and total assets of the company. According to Weston and Brigham (1998), firms with high levels of ROA generally use relatively small amounts of debt. This is
because the high ROA allows the company to capitalize with retained earnings only. However, other assumptions say a high ROA means that the company’s net profit is high, so if the company uses large debt it will not affect the capital structure, because the company’s ability to pay interest is also high. High returns make it possible to finance most of the funding needs with internally generated funds. Empirical research by Sharma (2005), Suresh and Kumar (2012), and Saidi (2004) indeed shows that profitability has a positive effect on company capital structure.

Based on the theory proposed by Weston and Copeland (1999) sales growth is a variable affecting the capital structure. Weston and Brigham (2001) also say that firms with relatively stable sales can be regarded as safer to take on more loans and bear a higher fixed burden than companies with unstable sales. Empirical research by Sharma (2005), Suresh and Kumar (2002), and Saidi (2004) shows that sales growth is one variable affecting company capital structure. The higher the company asset structure the higher its capital structure; this means the greater the fixed assets that can be used as debt collateral. In contrast, the lower the asset structure of an enterprise, the lower its ability to guarantee its long-term debt. This is in accordance with the theory of Weston and Brigham (1998: 713) that firms having assets as debt collateral tend to use larger amounts of debt. Assets referred to as collateral for debt are fixed assets.

The Jakarta Islamic Index (JII) is the last index developed by the Jakarta Stock Exchange in cooperation with Danareksa Investment Management (DIM) consisting of 30 stocks compliant with the provisions of Sharia securities, or index based on Islamic Sharia. In other words, this index included stocks that meet the Islamic Sharia provisions. Shares of a company are included in the sharia index if the enterprise is not a gambling business, conventional financial institution (ribā) including conventional banking and insurance, business that produces, distributes and trades in haram food and beverages as well as businesses that produce, distribute or provide morally corrupt and harmful goods or services.

The companies listed on the JII have total interest-based debt compared to total assets not exceeding 45%; total interest income and other unlawful income compared to total revenue and other income is less than 10%. In this index, a six monthly review is undertaken with the determination of index components at the beginning of January and July of each year, while changes in issuers’ type of business will be monitored continuously based on available public data. Thus
companies listed on the JII have special characteristics of the capital structure, which is different from other companies.

This study highlights the factors affecting the sharia capital structure of active sharia companies in the JII (Jakarta Islamic Index) in 2014-2016. This study is conducted to determine the effect of Company Size, Liquidity, Return on Assets (ROA), and Sales Growth, on the Capital Structure of companies whose shares are listed in JII. Hypotheses proposed in this research are as follows: First, Company Size has a positive effect on Capital Structure. Second, Liquidity has a positive effect on Capital Structure. Third, ROA has a positive effect on Capital Structure. Fourth, Sales Growth has a positive effect on Capital Structure.

2. METHOD

This study uses purposive sampling technique, by determining the selected sample through certain criteria specified such as company registered in the Jakarta Islamic Index and issuing complete financial report from 2014-2016 so that the selected sample numbers 20 companies. The variables are Debt to Equity Ratio, Size, Liquidity, Return to Assets, and Sales Growth. For the readers’ information, the Financial Services Authority (OJK) conducts a screening process for issuers selected to enter the Jakarta Islamic Index (30 companies) annually. However, being an issuer every year does not necessarily guarantee it to be included in the JII. The OJK determines and selects which companies to be included in the JII. Sources of data in this study are secondary data taken from the financial statements of 20 companies (shown in Table 1).

<table>
<thead>
<tr>
<th>No</th>
<th>Code</th>
<th>Stock Name</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AALI</td>
<td>Astra Agro Lestari Tbk</td>
<td>Agriculture</td>
</tr>
<tr>
<td>2</td>
<td>ADRO</td>
<td>Adaro Energi Tbk</td>
<td>Mining</td>
</tr>
<tr>
<td>3</td>
<td>AKRA</td>
<td>Akr Corporindo Tbk</td>
<td>Trade, Services, and Investment</td>
</tr>
<tr>
<td>4</td>
<td>ANTM</td>
<td>Aneka Tambang Tbk</td>
<td>Mining</td>
</tr>
<tr>
<td>5</td>
<td>ASII</td>
<td>Astra Internasional Tbk</td>
<td>Miscellaneous Industry</td>
</tr>
<tr>
<td>6</td>
<td>EXCL</td>
<td>XL Axiata Tbk</td>
<td>Infrastructure, Utilities,</td>
</tr>
</tbody>
</table>
TABLE 1 (continued)

<table>
<thead>
<tr>
<th>No</th>
<th>Code</th>
<th>Stock Name</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>ICBP</td>
<td>Indofood CBF Sukses Makmur Tbk</td>
<td>Consumer Goods Industry</td>
</tr>
<tr>
<td>8</td>
<td>INCO</td>
<td>Vale Indonesia Tbk</td>
<td>Mining</td>
</tr>
<tr>
<td>9</td>
<td>INDF</td>
<td>Indofood Sukses Makmur Tbk</td>
<td>Consumer Goods Industry</td>
</tr>
<tr>
<td>10</td>
<td>KLBF</td>
<td>Kalbe Farma Tbk</td>
<td>Consumer Goods Industry</td>
</tr>
<tr>
<td>11</td>
<td>LPPF</td>
<td>Matahari Department Store Tbk</td>
<td>Trade, Services, and Investment</td>
</tr>
<tr>
<td>12</td>
<td>LSIP</td>
<td>PP London Sumatra Indonesia Tbk</td>
<td>Agriculture</td>
</tr>
<tr>
<td>13</td>
<td>PGAS</td>
<td>Perusahaan Gas Negara (Persero) Tbk</td>
<td>Infrastructure, Utilities, and Transportation</td>
</tr>
<tr>
<td>14</td>
<td>PTBA</td>
<td>Tambang Batu Bara Bukit Asam (Persero) Tbk</td>
<td>Mining</td>
</tr>
<tr>
<td>15</td>
<td>SMGR</td>
<td>Semen Indonesia (Persero) Tbk</td>
<td>Basic Industry and Chemicals</td>
</tr>
<tr>
<td>16</td>
<td>SSMS</td>
<td>Sawit Sumber Mas Sarana Tbk</td>
<td>Agriculture</td>
</tr>
<tr>
<td>17</td>
<td>TLKM</td>
<td>Telekomunikasi Indonesia Tbk</td>
<td>Infrastructure, Utilities, and Transportation</td>
</tr>
<tr>
<td>18</td>
<td>TPIA</td>
<td>Chandra Asri Petrochemicals Tbk</td>
<td>Basic Industry and Chemicals</td>
</tr>
<tr>
<td>19</td>
<td>UNTR</td>
<td>United Tractors Tbk</td>
<td>Trade, Services, and Investment</td>
</tr>
<tr>
<td>20</td>
<td>UNVR</td>
<td>Unilever Indonesia Tbk</td>
<td>Consumer Goods Industry</td>
</tr>
</tbody>
</table>

Source: www.idx.co.id (processed)

The technique used in this study is multiple regression technique. However, before performing multiple regression test, a classical assumption test is necessary to ascertain whether the multiple linear regression model used does not have problems of normality, multicollinearity, heteroscedasticity, and autocorrelation. After the classical assumption test, the next is the hypothesis test including $t$-test, $F$-test, and coefficient of determination (Husaeni, 2017).
The mathematical equation used in this study is:

\[ DER_t = a + \beta_1 \text{Size}_t + \beta_2 \text{Liquidity}_t + \beta_3 \text{ROA}_t + \beta_4 \text{SalesGrowth}_t \]

where

- \( DER \) is the amount of Debt to Equity Ratio in companies registered in JII at the period of \( t \);
- \( \text{Size} \) is the size of the company registered in JII at the period of \( t \);
- \( \text{Liquidity} \) represents the ratio between current assets to current liabilities of companies registered in JII at the period of \( t \);
- \( \text{ROA} \) is Return on Asset in companies registered in JII at the period of \( t \);
- \( \text{SalesGrowth} \) is the growth of sales in companies registered in JII at the period of \( t \).

The selection of the above variables follows Margaretha and Ramadhan (2010), Prabansari and Kusuma (2005), Joni and Lina (2010).

3. RESULTS AND DISCUSSION

3.1 FINDINGS

Normality test results show a significance value of 0.064, greater than the level of significant value at 0.05, which shows normally distributed data. Correlation of each variable is below 90%. The four independent variables provide a VIF value at about 1 or below 10.0 and a tolerance value above 0.10. Thus, it is concluded that there is no multicollinearity problem in the regression model. The Dubin-Watson (DW) value of 1.955 means there is no autocorrelation because the DW value is between -2 and +2. By using Runs Test, the Test value is -0.13683 with a 0.176 probability which is not significant at 0.05 meaning that the null hypothesis is accepted. It is concluded that there is no autocorrelation between residual values. Scatterplot points are spread randomly, do not form a certain clear pattern, and are spread either above or below the number 0 on the Y-axis. This means there is no heteroscedasticity on the regression model so that the regression model is appropriate to predict \( DER \).

The result of \( F \) statistic test is \( F \) value of 4.567 with a significance level of 0.003, so the regression model can be used to
predict DER or in other words variable of company size, liquidity, ROA, and sales growth, similarly have an effect on DER (shown in Table 2).

**TABLE 2**

*F Test Result: ANOVA*

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>80.421</td>
<td>4</td>
<td>20.105</td>
<td>4.567</td>
<td>.003</td>
</tr>
<tr>
<td>Residual</td>
<td>242.107</td>
<td>55</td>
<td>4.402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>322.528</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *Dependent Variable: Y_DER*,

*Predictors: (Constant), X1_Size, X2_Liquidity, X3_ROA, X4_Sales Growth*

Based on the multiple linear regression equation in Table 3, the regression coefficient of company size is obtained at (-) 0.851. These coefficients indicate a negative relationship between company size variables on the DER. The liquidity regression coefficient of (-) 0.006, indicates a negative relationship between the liquidity variable on the DER. The regression coefficient of ROA is (+) 0.058. The coefficient indicates a positive relationship between ROA variable and the DER. The Sales Growth regression coefficient is (+) 0.003, indicating a positive relationship between Sales Growth variable to DER. Based on the regression beta coefficient in Table 3, t can be concluded that company size variables have the greatest effect on financing with beta regression coefficient value of (-) 0.851, followed by ROA, Liquidity and Sales Growth variable with regression beta value of (+) 0.058, (-) 0.006 and (+) 0.003 respectively.

**TABLE 3**

*t-Test Result: Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E.</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>8.159</td>
<td>5.304</td>
<td></td>
<td>.130</td>
</tr>
<tr>
<td>X1_Size</td>
<td>-.851</td>
<td>.668</td>
<td>-.169</td>
<td>-1.274</td>
</tr>
<tr>
<td>X2_Liquidity</td>
<td>-.006</td>
<td>.003</td>
<td>-.261</td>
<td>-2.111</td>
</tr>
<tr>
<td>X3_ROA</td>
<td>.058</td>
<td>.028</td>
<td>.289</td>
<td>2.111</td>
</tr>
<tr>
<td>X4_SalesGrowth</td>
<td>.003</td>
<td>.007</td>
<td>.011</td>
<td>.075</td>
</tr>
</tbody>
</table>

Note: Dependent Variable: Y_DER
Company size variable has a negative and insignificant effect on DER. The result of multiple regression analysis shows that company size has $t$-count value (-1.274) $< t$-table (1.673) (df = 55, Pr = 0.05) Which means $H_1$ is rejected. It is also supported by the significance of company size (0.208) $> 0.05$. Liquidity variable has positive and significant effect on the DER; result of multiple regression analysis shows that liquidity has $t$-count value (-2.111) $> t$-table (1.673) (df = 55, Pr = 0.05) which means $H_2$ is accepted. It is also supported by the significance value of liquidity (0.039) $< 0.05$. The variable of ROA has a positive and significant influence on the DER. The result of multiple regression analysis shows that ROA has $t$-count value (2.111) $> t$-table (1.673) (df = 55, Pr = 0.05). It is also supported by the significance value of ROA of (0.039) $< 0.05$. Sales Growth variable has a positive and significant effect on DER. The result of multiple regression analysis shows that Sales Growth has $t$-count value (0.075) $< t$-table (1.673) (df = 55, Pr = 0.05) which means $H_2$ is rejected. It is also supported by the significance value of Sales Growth (0.940) $> 0.05$.

### TABLE 4
Coefficient of Determination: Model Summary$^b$

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R$ Square</th>
<th>Adjusted $R$ Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.499$^a$</td>
<td>.249</td>
<td>.195</td>
<td>2.09808</td>
</tr>
</tbody>
</table>

Note: $^a$Predictors: (Constant), X1_Size, X2_Liquidity, X3_ROA, 4_SalesGrowth.
$^b$Dependent Variable: Y_DER

Based on Table 4, it can be seen that the value of adjusted $R^2$ is 0.195; this means that 19.5% of the debt to equity ratio (DER) variation can be explained by the variation of the four independent variables of company size, liquidity, ROA, and Sales Growth. While the rest of 79.5% is explained by other causes outside the model. Meanwhile, the influence of company size, liquidity, ROA, and Sales Growth variables simultaneously on debt to equity ratio is 0.249 or 24.9% while 75.1% is explained by other causes outside the model.

3.2 ANALYSIS

Results of testing on the first hypothesis show that company size has no significant effect on capital structure. $T$-count value (-1.274) $< t$-
table (1.673) (df = 55, Pr = 0.05) with significance level of company size (0.208) > 0.05. These results are in line with the results of research conducted by Sujipto (2001) and Mutaminah (2003) which states that the company size has no significant effect on capital structure. But this result is contrary to research conducted by Hendri and Sutapa (2006), Kartika (2009), Kartini and Arianto (2008) who stated that company size has a positive and significant effect on capital structure. This can be seen in that the larger the size of a company, the greater the tendency to use external funds. This is because large companies have large funding needs and one of the alternatives is by using external funds. So the larger the company is, the greater the tendency to use debt, to meet the needs of its funds than small companies. However, the capital itself from big companies will also be greater.

From the test result on the second hypothesis, it shows that liquidity has a significant effect with a negative direction toward the capital structure. T-count value (-2.111) > t-table (1.673) (df = 55, Pr = 0.05) with significance level of company size (0.039) < 0.05. Liquidity variable has a regression coefficient with a negative direction equal to -0.006. This means that a 1 percent increase in the liquidity variable will decrease the capital structure level by 0.6 percent. The result of this research contradicts Indriani and Widyarti (2013) which states that there is no significant influence between a variable of liquidity to a capital structure with t-value equal to 0.182 and significance value equal to 0.856.

Results of testing on the third hypothesis shows that ROA has a significant positive effect on capital structure. T-count value (2.111) > t-table (1.673) (df = 55, Pr = 0.05) with significance level of company size (0.039) < 0.05. Liquidity variable has a regression coefficient with a positive direction of 0.085. This means that a 1 percent increase in the ROA variable will raise the capital structure level by 8.5 percent. The results of this study are in accordance with the theory put forward by Weston and Brigham (1998, 713) which states that companies with high levels of profitability (ROA), generally use debt in relatively small amounts. This is because high profitability (ROA) makes it possible for companies to capitalize with retained earnings. This means the company has its self-owned capital larger than its long-term debt. This is because companies with high-level profitability can finance their business activities with retained earnings, so the company will use relatively small amounts of debt. The results of this study are in accordance with Safavian and Sharma (2007) who state that companies having high profits will use little debt
and vice versa. Vassalou and Xing (2004), however, state that profitability has a significant negative effect on capital structure.

Test results on the fourth hypothesis, show that sales growth has no significant effect on capital structure. T-count value (0.075) < t-table (1.673) (df = 55, Pr = 0.05) with significance level of company size (0.940) > 0.05. From the analysis of results, it is known that there is no significant positive influence between sales growth variable on debt to equity ratio. The insignificant growth in sales effect on the capital structure indicates that the firm’s managers pay little attention to these variables in funding decisions or capital structure decisions. The resulting sign is positive, similar to the initial hypothesis indicating that each increase in the variable sales growth of 1% will increase the debt to equity ratio (DER) by 0.3% with the assumption that other independent variables remain constant. With the increase in sales, the company can increase its ability to earn revenue and profit; with the increase in income, the company can cover its operational costs and improve its capital structure, because it can pay corporate debt and increase its own capital. The result of this research is consistent with Indriani and Widyarti (2013) which states that there is no significant influence between sales growth variable to the capital structure with the t value of 1.196 and significance value 0.234. And contrary to research conducted by Hassa (2008) stating that sales growth has a significant effect on capital structure in the opposite direction, Yanuar (2008) stated that sales growth has influence with negative direction, and Hasan (2006) stated that sales growth has a significant effect on the capital structure.

4. CONCLUSION

From the analysis of the capital structure of sharia issuers listed in the Jakarta Islamic Index (JII), it can be concluded that there is no significant influence between company size variable on debt to equity ratio (DER). Liquidity affects significantly by negative direction on debt to equity ratio (DER). Return on Assets (ROA) has a significant effect on debt to equity ratio (DER). Sales growth has no significant effect on debt to equity ratio (DER). The adjusted R Square value is 0.195. It means that 19.5% variation of debt to equity ratio (DER) can be explained by the variation of the four independent variables including company size, liquidity, ROA, and sales growth. While the rest, 79.5%, is explained by other causes. And the influence of the four independent variables on debt to equity ratio (DER) simultaneously
obtained a value of 0.249 or 24.9% while 75.1% is explained by other causes outside the model. This research is only limited to empirical studies of factors influencing capital structure of companies listed in the Jakarta Islamic Index, but it does not solve the problem of how the capital structure itself impacts the company’s performance. Therefore, other researchers who are interested in the problems of company capital structure can develop this research in order to find out the impact of the capital structure used by the company on company performance.

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